

ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

AN 1982:196445 BIOSIS

DN PREV198273056429; BA73:56429

TI EFFECT OF METHYL COBALAMIN ON SPERM COUNT AND SPERM MOTILITY IN
OLIGO ZOO SPERMIC CASES.

AU KIMURA M [Reprint author]; MITSUKAWA S; MATSUDA S; ISHIKAWA H; ORIKASA S

CS DEP UROL, TOHOKU UNIV SCH MED

SO Japanese Journal of Fertility and Sterility, (1981) Vol. 26, No. 4, pp.
50-55.

CODEN: NFGZAD. ISSN: 0029-0629.

DT Article

FS BA

LA JAPANESE

AB The effects of methylcobalamin on the sperm count, sperm motility and seminal fluid concentrations of fructose, Zn, prostatic acid phosphatase (PAP) and vitamin B12 in oligozoospermic cases were studied by comparing the data obtained before and 3 mo. after administration. The blood levels of LH [luteinizing hormone], FSH and testosterone were normal in all cases. Sperm count, expressed as the total sperm count, increased in 58 of the 73 cases (79.5%). A total of 21 cases (36.0%) with preadministrative total sperm count below 100 million increased to more than 100 million. The preadministrative concentration of fructose in cases which the total sperm count had not increased to more than 100 million was significantly higher than the concentrations of normal cases. The value of fructose showed a tendency to increase after administration, which was not significant compared to the preadministrative value. The concentrations of Zn and PAP before and after administration showed no significant difference from the concentration of normal cases. The preadministrative value of vitamin B12 showed no significant difference from the value in normal cases. The concentration of vitamin B12 increased significantly after administration. The sperm motility improved in 60 of 73 cases (82.2%). Of 61 cases, 31 (58.8%) with a preadministrative motility of less than 55% improved. No significant difference was found in seminal fructose, Zn, PAP and vitamin B12 concentrations between the patients with and without improvement of sperm motility. Of 73 cases, 17 (23.0%) successfully achieved pregnancy.

CC Cytology - Animal 02506

Biochemistry studies - General 10060

Biochemistry studies - Vitamins 10063

Biochemistry studies - Proteins, peptides and amino acids 10064

Biochemistry studies - Sterols and steroids 10067

Biochemistry studies - Carbohydrates 10068

Biochemistry studies - Minerals 10069

Enzymes - Physiological studies 10808

Metabolism - Carbohydrates 13004

Metabolism - Sterols and steroids 13008

Metabolism - Minerals 13010

Metabolism - Proteins, peptides and amino acids 13012

Metabolism - Water-soluble vitamins 13018

Reproductive system - General and methods 16501

Reproductive system - Pathology 16506

Endocrine - Gonads and placenta 17006

Endocrine - Pituitary 17014

Pharmacology - Drug metabolism and metabolic stimulators 22003

Pharmacology - Clinical pharmacology 22005

Pharmacology - Reproductive system and implantation studies 22028

IT Major Concepts

Enzymology (Biochemistry and Molecular Biophysics); Metabolism;
Pharmacology; Reproductive System (Reproduction)

IT Miscellaneous Descriptors

HUMAN FERTILITY-DRUG LUTEINIZING HORMONE FSH ZINC PROSTATIC ACID
PHOSPHATASE VITAMIN B-12 PREGNANCY

ORGN Classifier

Hominidae 86215

Super Taxa

Primates; Mammalia; Vertebrata; Chordata; Animalia

Taxa Notes

Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 13422-55-4 (METHYLCOBALAMIN)
9002-67-9 (LUTEINIZING HORMONE)
9002-68-0 (FSH)
7440-66-6 (ZINC)
68-19-9 (VITAMIN B-12)

=>

Super Taxa

Primates; Mammalia; Vertebrata; Chordata; Animalia

Taxa Notes

Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 13422-55-4 (METHYLCOBALAMIN)
9002-67-9 (LUTEINIZING HORMONE)
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7440-66-6 (ZINC)
68-19-9 (VITAMIN B-12)

=>

DUPLICATE 3

AN 1999:291167 BIOSIS

DN PREV199900291167

TI Assimilation of (57Co)-labeled cobalamin in human fetal gastrointestinal xenografts into nude mice.

AU Aimone-Gastin, Isabelle [Reprint author]; Gueant, Jean Louis; Plenat, Francois; Muhale, Filipe; Maury, Florence; Djalali, Mahmoud; Gerard, Philippe; Duprez, Adrien

CS Cellular and Molecular Pathology in Nutrition, Faculte de Medecine de Nancy, Universite H. Poincare, 54505, Vandoeuvre les Nancy Cedex, France

SO Pediatric Research, (June, 1999) Vol. 45, No. 6, pp. 860-866. print.

CODEN: PEREBL. ISSN: 0031-3998.

DT Article

LA English

ED Entered STN: 5 Aug 1999

Last Updated on STN: 5 Aug 1999

AB Cobalamin (Cbl) and its Cbl-binding proteins are present in amniotic fluid. Because amniotic fluid is swallowed by the embryo-fetus, we studied the ability of Cbl to be transported and metabolized across the embryo-fetal digestive tract. Human embryonic stomachs and intestines were transplanted into nude mice. The basal secretion of Cbl-binding proteins was studied by gel filtration of the graft juices. Intrinsic factor (IF) was looked for in gastric mucosa by immunohistochemistry. The uptake of (57Co)-labeled Cbl by the intestinal graft was studied by Schilling tests and HPLC. IF, haptocorrin, and a transcobalamin-like protein were detected in gastric juice, with concentration ranges of 5.0-26.4, 1.9-27.1, and 5.2-12.6 pmol/mL, respectively. The IF (57Co)Cbl complex had a single isoprotein with a pI at 5.6, which was maintained after incubation with neuraminidase. Urine excretion percentages (Schilling tests) ranged from 5.5 to 21.2% and from 0.3 to 1.6% when cyano-(57Co)Cbl-IF or cyano-(57Co)Cbl, respectively, was instilled in intestinal grafts. Chloroquine reduced significantly the percentage of excreted (57Co)Cbl. The (57Co)Cbl was mainly excreted as cyano-(57Co)Cbl in urines, showing a low coenzyme conversion. In conclusion, IF is secreted by the nonstimulated embryonic stomach and lacks sialic acid. Cbl binds to it and is subsequently transported across the xenografted embryo-fetal intestine. This suggests that amniotic fluid may contribute to Cbl delivery to the embryo-fetus.

CC Digestive system - General and methods 14001

Biochemistry studies - General 10060

Development and Embryology - General and descriptive 25502

Biophysics - General 10502

IT Major Concepts

Digestive System (Ingestion and Assimilation)

IT Parts, Structures, & Systems of Organisms

gastric mucosa: digestive system; intestines: digestive system;

stomach: digestive system

IT Chemicals & Biochemicals

chloroquine; cobalamin-binding proteins; cobalamin:

assimilation, cobalt-57-labeled, uptake, metabolism, urine excretion;

haptocorrin: gastric juice; intrinsic factor: gastric juice;

transcobalamin-like protein: gastric juice

IT Miscellaneous Descriptors

gastrointestinal xenografts

ORGN Classifier

Hominidae 86215

Super Taxa

Primates; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

human: embryo, fetus

Taxa Notes

Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ORGN Classifier

Muridae 86375

Super Taxa

Rodentia; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

mouse: nude

Taxa Notes

Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals,

Rodents, Vertebrates

RN 54-05-7 (chloroquine)

13408-78-1 (cobalamin)

12774-24-2 (TRANSCOBALAMIN)

13981-50-5 (COBALT-57)

ORGN Classifier

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mouse: nude

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The sperm motility improved in 60 of 73 cases (82.2%). Of 61 cases, 31
(58.8%) with a preadministrative motility of less than 55% improved. No
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Biochemistry studies - General 10060
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Biochemistry studies - Proteins, peptides and amino acids 10064
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Reproductive system - Pathology 16506
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Endocrine - Pituitary 17014
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IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Metabolism;
Pharmacology; Reproductive System (Reproduction)

IT Miscellaneous Descriptors
HUMAN FERTILITY-DRUG LUTEINIZING HORMONE FSH ZINC PROSTATIC ACID
PHOSPHATASE VITAMIN B-12 PREGNANCY

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CS Cellular and Molecular Pathology in Nutrition, Faculte de Medecine de
Nancy, Universite H. Poincare, 54505, Vandoeuvre les Nancy Cedex, France
SO Pediatric Research, (June, 1999) Vol. 45, No. 6, pp. 860-866. print.
CODEN: PEREBL. ISSN: 0031-3998.
DT Article
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ED Entered STN: 5 Aug 1999
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Cbl to be transported and metabolized across the embryo-fetal digestive
tract. Human embryonic stomachs and intestines were transplanted into
nude mice. The basal secretion of Cbl-binding proteins was studied by gel
filtration of the graft juices. Intrinsic factor (IF) was looked for in
gastric mucosa by immunohistochemistry. The uptake of (57Co)-labeled Cbl
by the intestinal graft was studied by Schilling tests and HPLC. IF,
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Chloroquine reduced significantly the percentage of excreted (57Co)Cbl.
The (57Co)Cbl was mainly excreted as cyano-(57Co)Cbl in urines, showing a
low coenzyme conversion. In conclusion, IF is secreted by the
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CC Digestive system - General and methods 14001
Biochemistry studies - General 10060
Development and Embryology - General and descriptive 25502
Biophysics - General 10502
IT Major Concepts
Digestive System (Ingestion and Assimilation)
IT Parts, Structures, & Systems of Organisms
gastric mucosa: digestive system; intestines: digestive system;
stomach: digestive system
IT Chemicals & Biochemicals
chloroquine; cobalamin-binding proteins; cobalamin:
assimilation, cobalt-57-labeled, uptake, metabolism, urine excretion;
haptocorrin: gastric juice; intrinsic factor: gastric juice;
transcobalamin-like protein: gastric juice
IT Miscellaneous Descriptors
gastrointestinal xenografts
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human: embryo, fetus
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ANSWER 4 OF 6 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
AN 1977:61989 BIOSIS
DN PREV197713061989; BR13:61989
TI STUDY ON METABOLISM OF VITAMIN B-12 IN VARIOUS DISEASES WITH SPECIAL
REFERENCE TO CHANGES AND OCCURRENCE OF COBALAMINS IN SERUM URINE
AND CEREBRO SPINAL FLUID AFTER INTRA MUSCULAR
INJECTION OF CYANO COBALAMIN.
AU YAMADA S; TANAKA N; HATA C; KATO T; OOHIRA S; NAGOSHI A; SUZUKI S
SO Japanese Journal of Medicine, (1976) Vol. 15, No. 2, pp. 168-169.
CODEN: JJMDAT. ISSN: 0021-5120.
DT Article
FS BR
LA Unavailable
CC Clinical biochemistry - General methods and applications 10006
Biochemistry methods - Vitamins 10053
Biochemistry studies - Vitamins 10063
Biophysics - Methods and techniques 10504
Movement 12100
Metabolism - Carbohydrates 13004
Metabolism - Water-soluble vitamins 13018
Metabolism - Metabolic disorders 13020
Nutrition - Water-soluble vitamins 13210
Digestive system - Pathology 14006
Blood - Blood and lymph studies 15002
Blood - Blood, lymphatic and reticuloendothelial pathologies 15006
Blood - Lymphatic tissue and reticuloendothelial system 15008
Blood - Other body fluids 15010
Urinary system - General and methods 15501
Endocrine - Pancreas 17008
Muscle - General and methods 17501
Nervous system - Physiology and biochemistry 20504
Routes of immunization, infection and therapy 22100
Neoplasms - Blood and reticuloendothelial neoplasms 24010
IT Major Concepts
Clinical Chemistry (Allied Medical Sciences); Endocrine System
(Chemical Coordination and Homeostasis); Gastroenterology (Human
Medicine, Medical Sciences); Hematology (Human Medicine, Medical
Sciences); Metabolism; Nutrition; Oncology (Human Medicine, Medical
Sciences)
IT Miscellaneous Descriptors
ABSTRACT HUMAN LIVER CIRRHOSIS DIABETES MELLITUS ACUTE MYELOCYTIC
LEUKEMIA CHRONIC MYELOCYTIC LEUKEMIA
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
RN 68-19-9 (VITAMIN B-12)
13408-78-1D (COBALAMINS)
68-19-9 (CYANO COBALAMIN)

ANSWER 5 OF 6 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

AN 1977:6044 BIOSIS

DN PREV197713006044; BR13:6044

TI NATURAL OCCURRENCE OF B-12 IN HUMAN CEREBRO SPINAL
FLUID.

AU TANAKA N; YAMADA S; NAGOSHI A; SUZUKI S; UCHINO H

SO Acta Haematologica Japonica, (1975) Vol. 38, No. 4, pp. 355-356.
CODEN: NKGZAE. ISSN: 0001-5806.

DT Article

FS BR

LA Unavailable

CC Clinical biochemistry - General methods and applications 10006
Biochemistry studies - Vitamins 10063
Biochemistry studies - Carbohydrates 10068
Chordate body regions - Back and buttocks 11310
Pathology - Diagnostic 12504
Metabolism - Carbohydrates 13004
Metabolism - Water-soluble vitamins 13018
Metabolism - Metabolic disorders 13020
Blood - Other body fluids 15010
Endocrine - Pancreas 17008
Nervous system - General and methods 20501
Nervous system - Pathology 20506

IT Major Concepts
Clinical Chemistry (Allied Medical Sciences); Endocrine System
(Chemical Coordination and Homeostasis); Metabolism; Neurology (Human
Medicine, Medical Sciences)

IT Miscellaneous Descriptors
METHYL COBALAMIN CYANO COBALAMIN DIABETIC
NEUROPATHY

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 13422-55-4 (METHYL COBALAMIN)
68-19-9 (CYANO COBALAMIN)

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AN 1977:6044 BIOSIS

DN PREV197713006044; BR13:6044

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AU TANAKA N; YAMADA S; NAGOSHI A; SUZUKI S; UCHINO H

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Endocrine - Pancreas 17008
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Nervous system - Pathology 20506

IT Major Concepts
Clinical Chemistry (Allied Medical Sciences); Endocrine System
(Chemical Coordination and Homeostasis); Metabolism; Neurology (Human
Medicine, Medical Sciences)

IT Miscellaneous Descriptors
METHYL COBALAMIN CYANO COBALAMIN DIABETIC
NEUROPATHY

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 13422-55-4 (METHYL COBALAMIN)
68-19-9 (CYANO COBALAMIN)

ANSWER 4 OF 6 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

AN 1977:61989 BIOSIS

DN PREV197713061989; BR13:61989

TI STUDY ON METABOLISM OF VITAMIN B-12 IN VARIOUS DISEASES WITH SPECIAL
REFERENCE TO CHANGES AND OCCURRENCE OF COBALAMINS IN SERUM URINE
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CODEN: JJMDAT. ISSN: 0021-5120.

DT Article

FS BR

LA Unavailable

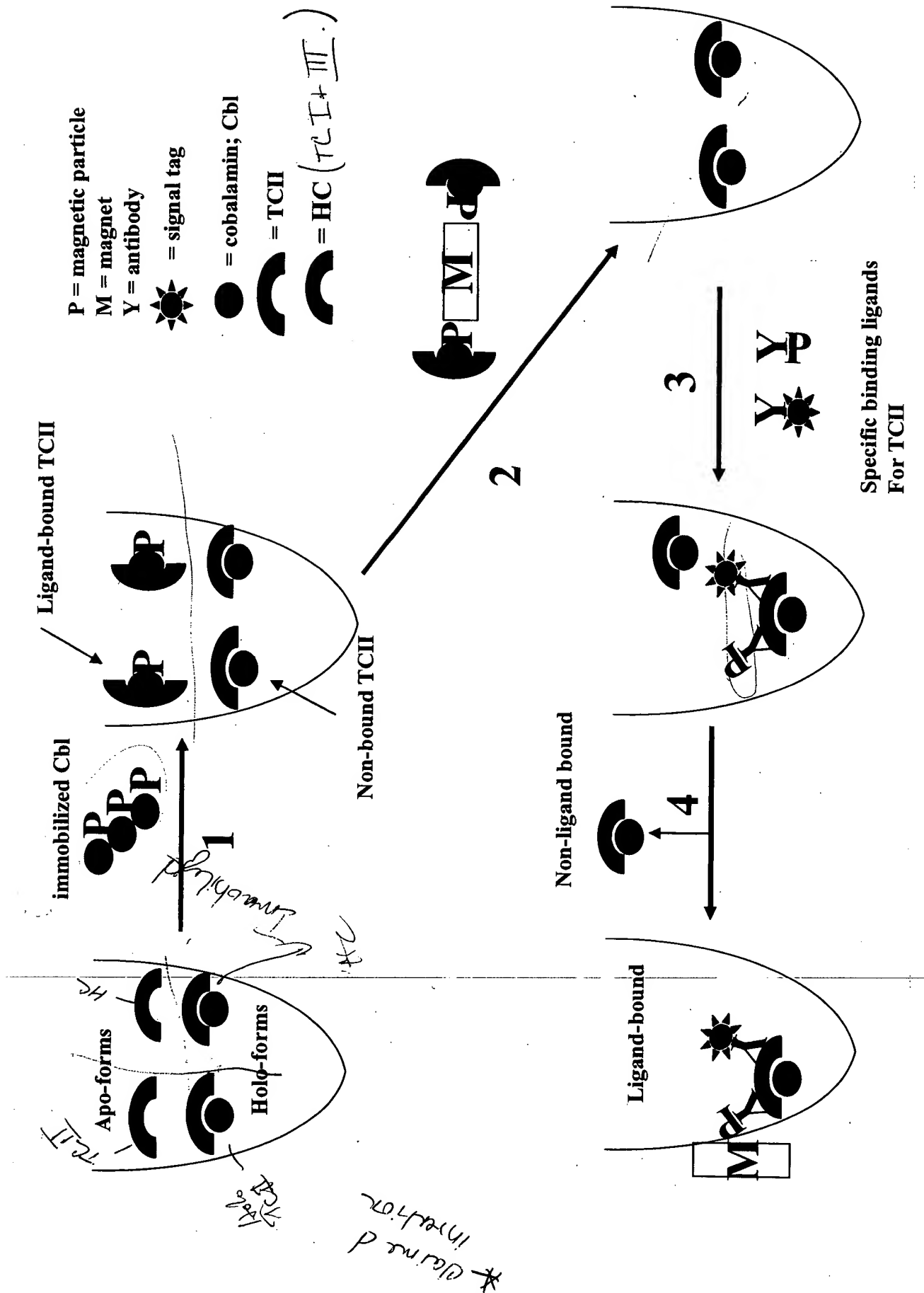
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Neoplasms - Blood and reticuloendothelial neoplasms 24010

IT Major Concepts
Clinical Chemistry (Allied Medical Sciences); Endocrine System
(Chemical Coordination and Homeostasis); Gastroenterology (Human
Medicine, Medical Sciences); Hematology (Human Medicine, Medical
Sciences); Metabolism; Nutrition; Oncology (Human Medicine, Medical
Sciences)

IT Miscellaneous Descriptors
ABSTRACT HUMAN LIVER CIRRHOSIS DIABETES MELLITUS ACUTE MYELOCYTIC
LEUKEMIA CHRONIC MYELOCYTIC LEUKEMIA

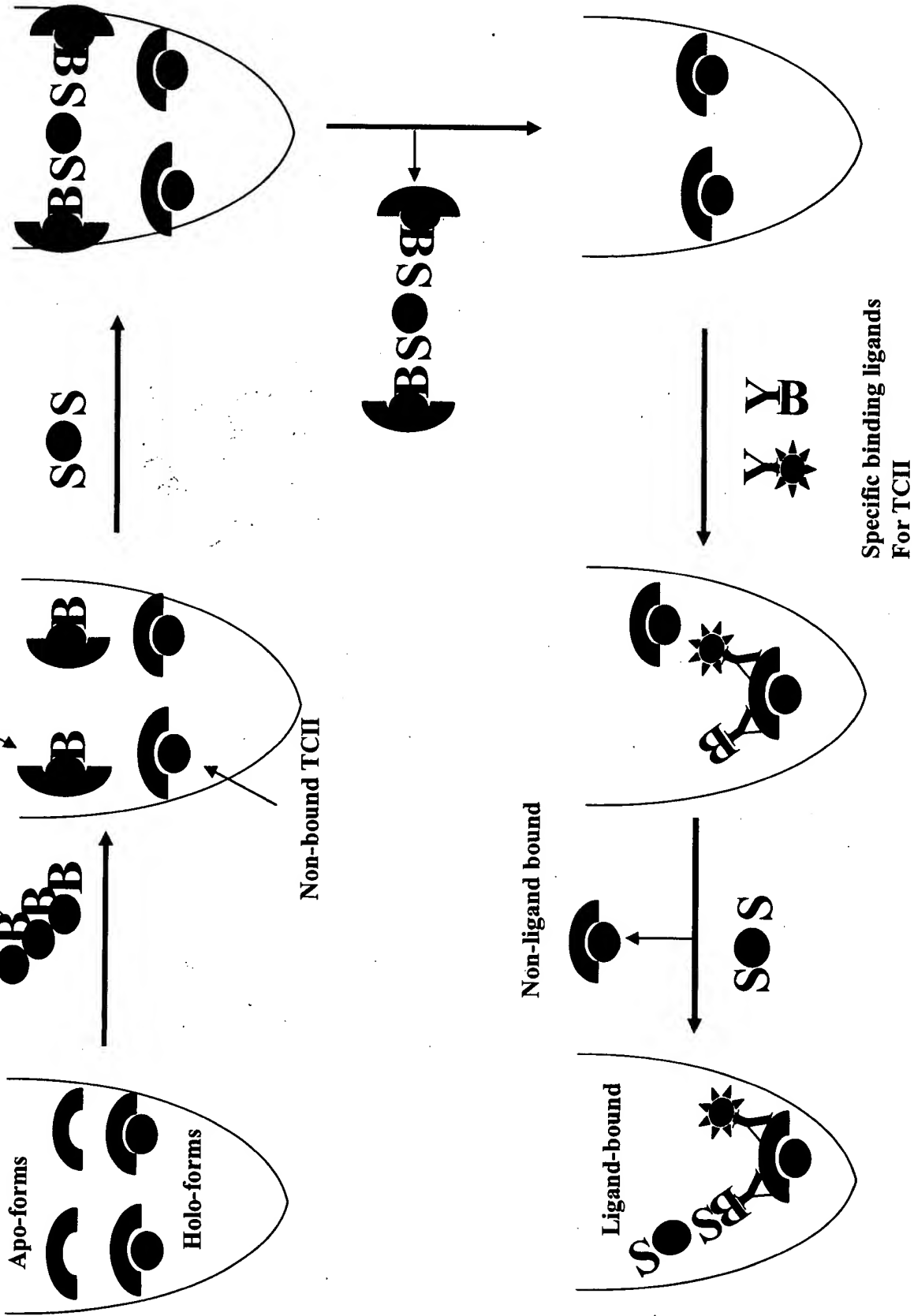
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Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 68-19-9 (VITAMIN B-12)
13408-78-1D (COBALAMINS)
68-19-9 (CYANO COBALAMIN)



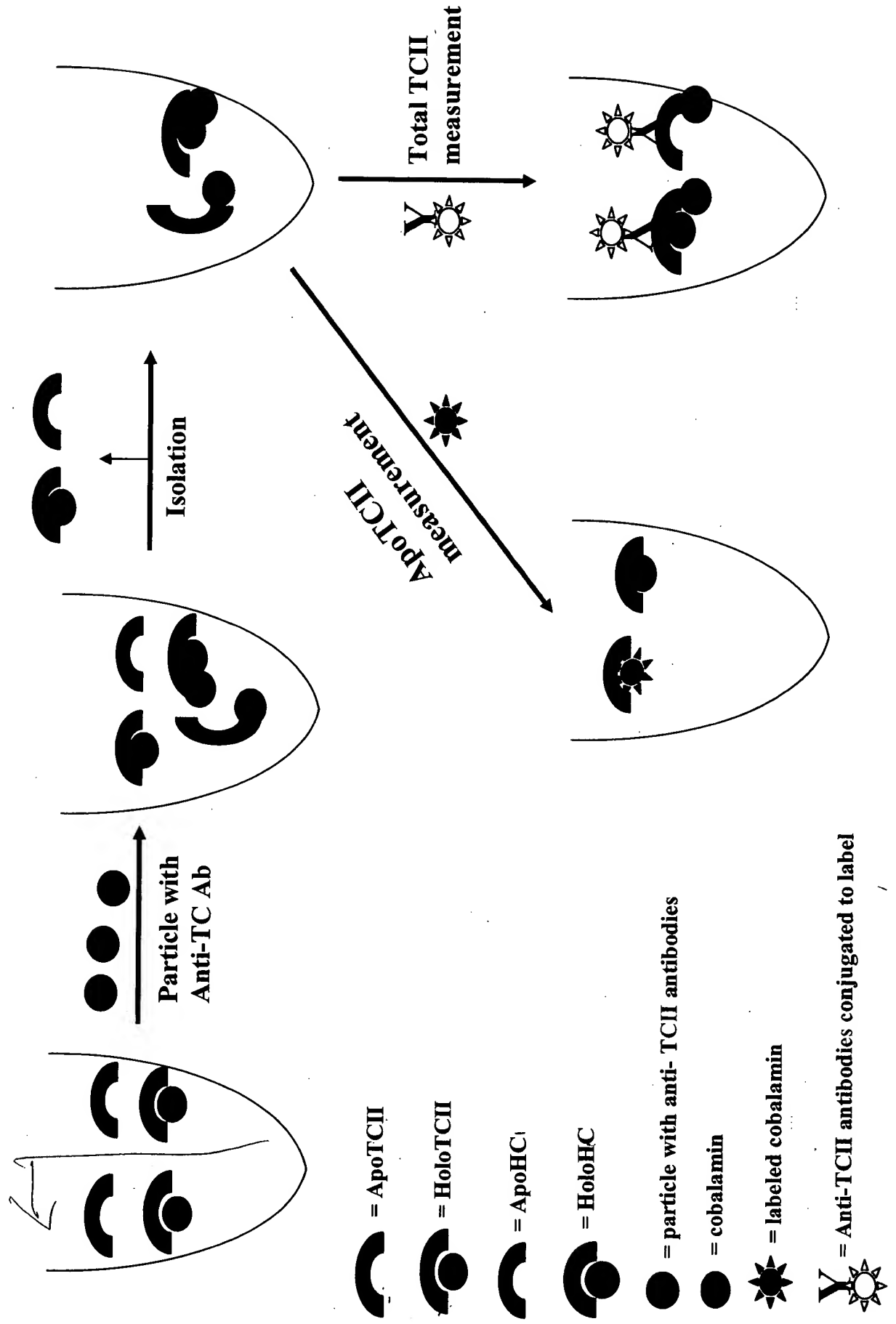
*labeled
conjugate*

immobilizable Cbl

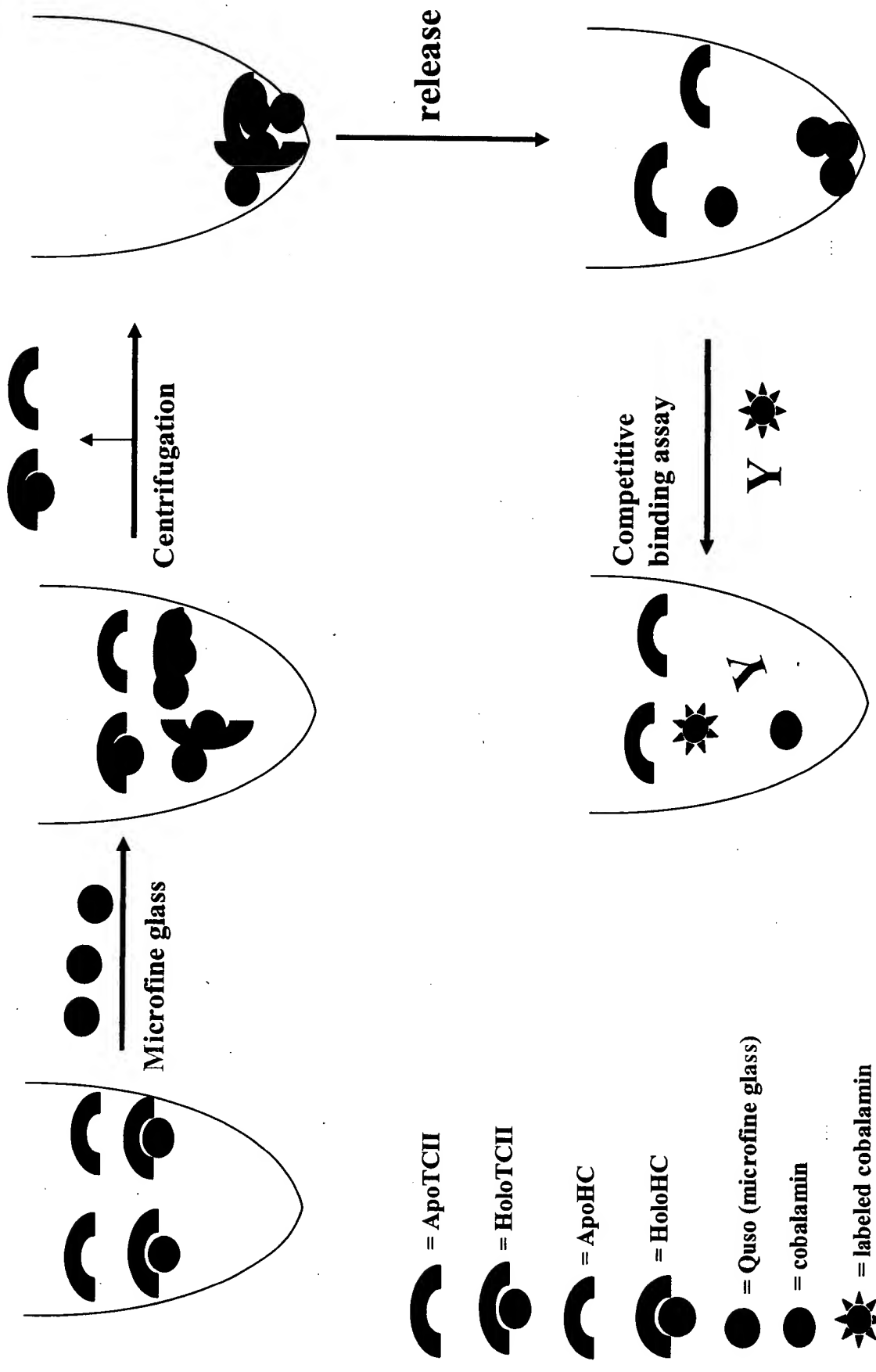



US Pat. Appl. No. 09/679,043

Frater-Schroeder 1982 ✓



Victor Herbert USP 4,680,273




 = ApoTCII

 = HoloTCII

 = ApoHC

 = HoloHC

 = Quso (microfine glass)

 = cobalamin

 = labeled cobalamin

Y = Intrinsic factor (cobalamin binding ligand)